

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

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(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PCT-5019	<b>FOR FURTHER ACTION</b> See Form PCT/IPEA/416	
International application No. PCT/EP2004/010944	International filing date (day/month/year) 29.09.2004	Priority date (day/month/year) 01.10.2003
International Patent Classification (IPC) or national classification and IPC B21D51/54, B21K1/04, F42B5/26		
Applicant GIOBBE S.R.L. et al.		
1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of 7 sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> ( <i>sent to the applicant and to the International Bureau</i> ) a total of 12 sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> ( <i>sent to the International Bureau only</i> ) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).		
4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the opinion <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input checked="" type="checkbox"/> Box No. VII Certain defects in the international application <input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application		
Date of submission of the demand 27.04.2005	Date of completion of this report 18.11.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer  Vinci, V  Telephone No. +49 89 2399-2364	



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PCT/EP2004/010944

**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
  - This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
    - international search (under Rules 12.3 and 23.1(b))
    - publication of the international application (under Rule 12.4)
    - international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

**Description, Pages**

1-12 as originally filed

**Claims, Numbers**

1-71 filed with telefax on 09.11.2005

**Drawings, Sheets**

1/4-4/4 as originally filed

a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3.  The amendments have resulted in the cancellation of:

- the description, pages
- the claims, Nos.
- the drawings, sheets/figs
- the sequence listing (*specify*):
- any table(s) related to sequence listing (*specify*):

4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- the description, pages
- the claims, Nos.
- the drawings, sheets/figs
- the sequence listing (*specify*):
- any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	1-71
	No: Claims	
Inventive step (IS)	Yes: Claims	1-71
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-71
	No: Claims	

**2. Citations and explanations (Rule 70.7):**

**see separate sheet**

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**Box No. VII Certain defects in the international application**

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The following defects in the form or contents of the international application have been noted:

**see separate sheet**

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**Box No. VIII Certain observations on the international application**

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The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**Claims 1 and 25**

Claim 1 relates to a die set for forming cartridge cases comprising at least 3 support elements comprising a upper element, a middle element and a bottom element connected together in the longitudinal direction, according to the characterizing portion of claim 1.

The subject-matter of claim 1 differs from the die set disclosed in document CH-A-178 286 (D1), which represents the closest prior art, in that:

- the support elements are connected together in the longitudinal direction by guide columns (D1 does not explicitly disclose the connection means provided), and in that
- the fixed middle element comprises means for shearing and means for forming (a drawing punch: see point VIII of this Report) the case (from a sheet of metal: see point VIII of this Report) able to co-operate with corresponding locating means associated with the bottom support element.

Claim 25 relates to a machine comprising such a die set and defines corresponding distinguishing technical features.

Claim 1 and 25 are thus novel and as such they meet the requirements of Art. 33(2) PCT.

The problem to be solved has to be seen in providing a simple and low-cost die set and machine for forming a cartridge cases from a sheet metal which allow a more rapid cycle time and graphically printing of the case before forming.

The solution to this problem proposed in claims 1 and 25 of the present application, clarified as specified under point VIII of this Report, is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

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Document D1 discloses a die set and a machine equipped with such a die suitable for forming a case starting from a tubular blank whereby this forming means are not meant for forming a case from a sheet metal. Moreover no shearing means are provided, which according to the present application, in combination with the forming means achieves forming of the cartridge case from a sheet metal.

Document US-A-2 079 102 (D2) discloses the same subject-matter as D1.

The other document are less relevant.

Therefore there is no lead in the available prior art leading in an obvious way to a die set and to a machine with such a die set according to claims 1 and 25.

**Claim 50**

Having regard to claim 47, its subject matter differs from document D1 in that:

- the cartridge case is formed starting from a metal sheet, and in that
- forming and boring the case is achieved in a single stage.

The subject-matter of claim 47 is therefore novel (Article 33(2) PCT).

The problem posed is the same as mentioned with respect to claims 1 and 25.

The solution to this problem proposed in method claim 47 of the present application, clarified as specified under point VIII of this Report, is considered as involving an inventive step (Article 33(3) PCT) because no document disclose or obviously suggest forming of the case starting from a metal sheet, whereby forming and boring is carried out in a single step. In particular both D1 and 2 teach forming of a case starting from a tubular blank, whereby no boring step is carried out. Moreover the case is not formed in a single step.

**Dependent Claims**

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Claims 2 to 24, 26 to 49 and 51 to 71 are dependent on claims 1, 25 and 50 respectively and as such also meet the requirements of the PCT with respect to novelty and inventive step.

**Amendments:** claim 1 is a combination of claims 1, 2 and 3 as filed. Claim 25 is a combination of claims 27, 29 and 30 as filed. Claim 50 is a combination of claims 54 and 57 as filed.

**Re Item VII**

**Certain defects in the international application**

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 is not mentioned in the description, nor are these documents identified therein.

The description has not been brought in conformity with the claims.

**Re Item VIII**

**Certain observations on the international application**

Claims 1, 25 and 50 are not supported by the description as required by Article 6 PCT, as their scope is broader than justified by the description and drawings. The reasons therefor are the following:

In claim 1 and 25 it is not specified that the die set is suitable for forming the case starting from a sheet metal, and that the forming means comprises a drawing punch in conformity with all embodiments of the description and drawings. Having regard to claim 50 it should have included the sharing operation in combination with forming of the case according to all embodiments of the description and drawings.

Moreover the fact that the three support elements are an upper element, a middle element and a bottom element should have been presented as compulsory feature (without the expression "i.e.") in conformity with the remaining formulation of claims 1 and 25 (Art. 6 PCT).

Moreover claim 25 essentially comprises all the features of claim 1 and is therefore not

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appropriately formulated as a claim dependent on the latter ("Machine for forming a case comprising a die set according to claim 1 ...") according to Rule 6.4 PCT.